



## IMPACT, CAUSALITY THEORY, AND BIG DATA

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## The evidence debate – an overly polemic debate

What is it that generates the staying power of a particular approach? Occasionally, this is attempted by institutional closure. The methodological armchair becomes a throne. A group declares itself to be the executive and attempts to lay down the law on a particular sphere of operations. (Pawson 2013, p. xii)

What the two camps mostly have in common is how little they truly understand about the effects of public policies. (*Evalsed Sourcebook: Method and Techniques*, p. 48)


What is being harshly debated?

Causality theories

Designs

Data

# Theories on causation (Sandahl – Petersson 2016)

- 
- > Counterfactual theory
  - > Manipulability theory
  - > Law-bound causation: INUS-conditions
  - > Probability theories of causation
  - > Generative mechanisms
  
  - > None is objection free – none is politically irrelevant !

## Counterfactual difference

Hence experiments are well-suited to studying causal relationships. No other scientific method regularly matches the characteristics of causal relationships so well. (Shadish – Cook – Campbell 2002, p. 7)

## Understanding diversity – INUS-conditions

Practical social action, in contrast [to science], must recognize diversity at an early date. Striking an average over diverse phenomena is almost never enough; the task is to understand the diversity. (Cronbach 1982, p. 295)

# Generative mechanisms

It is through the notion of program *mechanisms* that we take the step from asking whether a program works to understanding *what it is about a program* which makes it work. (Pawson & Tilley 1997, p. 66)

## Important to keep the theories apart

TBIE is backed by a vast array of qualitative, naturalistic, participatory, hermeneutic methods. However, these have not developed into a powerful and validated set of tools the CIE can draw upon. (*Evalsed Sourcebook: Method and Techniques*, p. 48)

This is, at least partly, because they rest on different theories on causation.



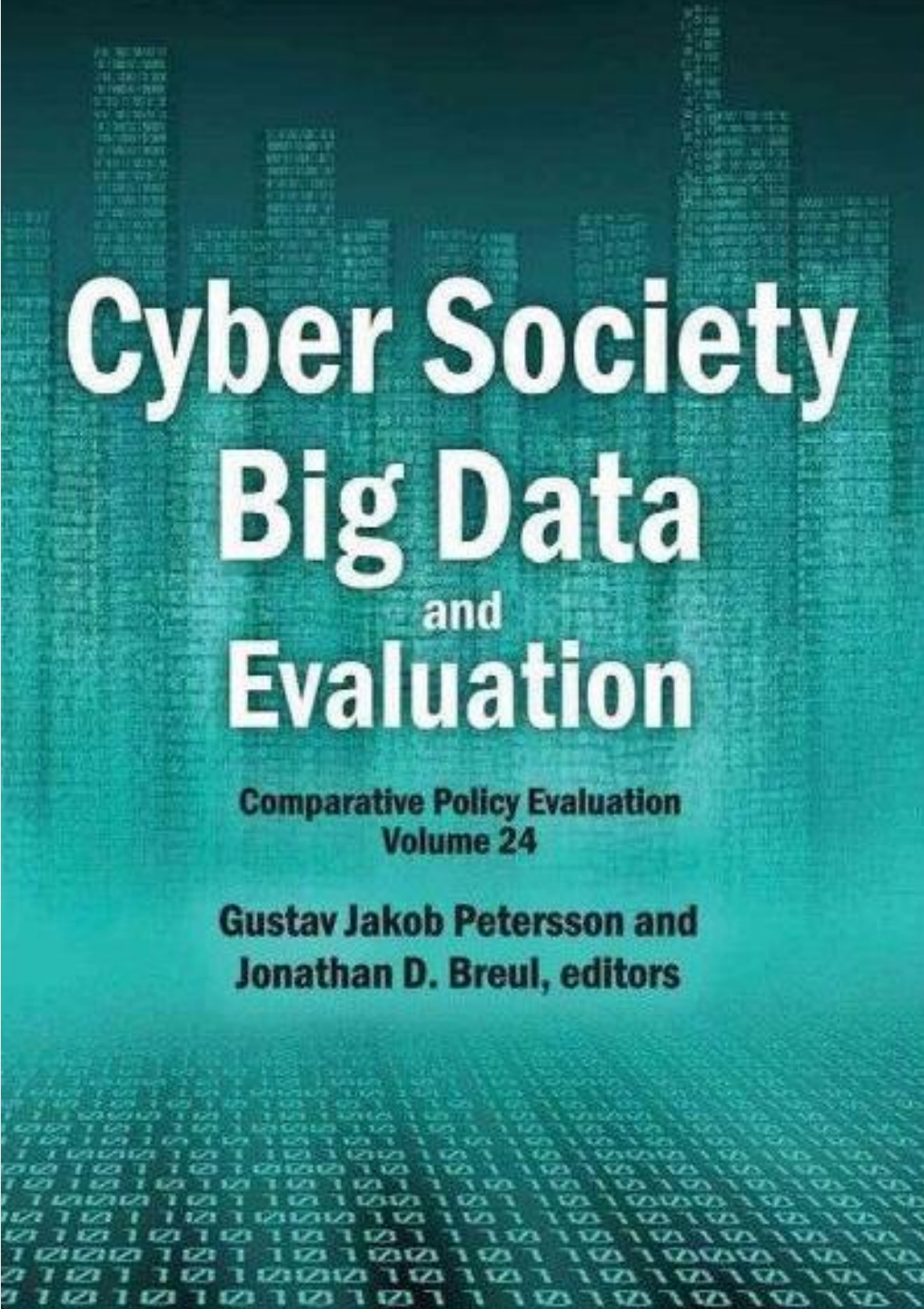
## The logic of politics

In particular, I take the position that evaluations are to be judged by the extent to which they help the political community achieve its ends. The logic of science must come to terms with the logic of politics. (Cronbach 1982, p. ix)

# Integration through synthesis?



- › Meta-analysis (in a particular form...) vs. (for instance) realist synthesis
- › Ex. combining meta-analysis and implementation studies: “Meta-modeling Social Programs: Methodological Reflections on a Practical Application” (Lemire 2017)



# Cyber Society Big Data and Evaluation

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# Big Data?

## One possible definition:

These data are also unique because they are “naturally occurring,” unlike survey data which result from the intrusion of researchers into everyday life. (Bail 2014, p. 469)

## Warning:

[T]he widespread belief that large data sets offer a higher form of intelligence and knowledge that can generate insights that were previously impossible, with the aura of truth, objectivity, and accuracy. (Boyd and Crawford 2012, p. 663)

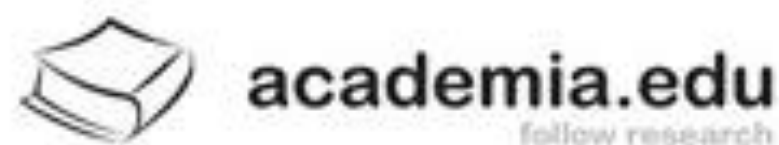
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*Kevin Murphy, NASA Program Executive for Earth Science Data Systems*

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